

the fleece **42** play an important role here. These parameters depend less on the material of the fleece, but rather on the weaving technique and/or the geometry of the fibers which cooperate here.

**[0065]** Capillarity describes the rising or sucking process of a liquid when getting into contact with narrow tubes (capillaries) or small cavities. The liquid will in this case distribute to a larger face and rise even against gravity. This effect occurs due to the molecular forces in the liquid and the surface tension involved therewith. In the instant application this liquid is as a rule water which is characterized by a large surface tension. Two factors play a quite substantial role here, namely cohesion and adhesion.

**[0066]** Cohesion is the “cohering force” of the molecules in a body. In a liquid the cohesive forces are so small that the molecules may move within the liquid. Adhesion is the “attraction force” between the molecules of two different substances.

**[0067]** If the liquid meets a solid surface and the adhesive forces between this surface and the liquid are stronger than the cohesive forces of the liquid, the liquid will attempt to wet the surface. In this process the molecules of the liquid are attracted by the adhesive forces by the surface of the solid body. Due to the cohesive forces, molecules which were attracted by the surface will drag along the remaining molecules. Thus, a meniscus will form at the contact face, i.e. the liquid will rise at the wall.

**[0068]** The capillary rise of a liquid may be calculated by means of the following equation:

$$h=2\sigma \cos \theta/\rho g r$$

wherein:

**[0069]**  $h$ =capillary rise of the liquid

**[0070]**  $\sigma$ =surface tension

**[0071]**  $\theta$ =contact angle

**[0072]**  $\rho$ =density of the liquid

**[0073]**  $g$ =gravitational acceleration

**[0074]**  $r$ =radius of the capillaries

**[0075]** At 20° C. the surface tension  $\sigma$  for water is 72.75 mN/m. Apart from this the density of water and the acceleration are also constant. If one assumes a contact angle of 0°, a value of 1 will result for the factor  $\cos \theta$ . Thus, the radius of the capillaries  $r$  remains as the only variable in this equation.

**[0076]** In the fleece **42** this factor  $r$  is determined by the cavities and the weaving structure, from which appropriate capillary rises of water can as a rule be determined by experiments for different fleeces. In the instant embodiments fleeces with a capillarity for water with a capillary rise of more than 15 cm have turned out suitable. If a higher value is chosen, the effect of distribution of the liquid on a larger face is the more distinct.

**[0077]** In addition to the embodiments explained, the invention allows for further design approaches.

**[0078]** Thus, it is not mandatorily necessary that the capillary rise of the fleece **42** is more than 15 cm. For some applications a lower capillary rise of e.g. 10 cm may also be sufficient.

**[0079]** Furthermore, the fleece **42** need not be made of glass fibers. Instead, plastic fibers or mixtures of different kinds of fibers may also be used. Also the kind of weaving of the fleece **42** may be arbitrary per se as long as it is of capillary-active design. Thus, the fleece **42** may, for

instance, also be a fleece EVO **130**, an Ortmann fleece, or any other suitable capillary-active fleece.

**[0080]** Furthermore, it is not necessary that the fleece **42** is laminated on the insulating body **41**. It may also be connected therewith by a needling process or simply be arranged loosely next to it.

**[0081]** The insulating body **41** comprises a water vapor diffusion resistance  $\mu$  of  $\leq 3$ . In order to improve the diffusion capacity, a lower  $\mu$  value may, however, also be chosen, for instance,  $\mu$  equal to 2.

**[0082]** In the illustrated embodiment the insulating body **41** is formed of mineral wool. Instead, other types of fiber and especially natural fibers such as, for instance, soft wood fibers or the like, may also be used. Mixtures of such fibers are also possible.

1. A heat insulating element (**4**) for an interior insulation, a facade insulation, a roof insulation, or the like at a building (**1**), comprising an insulating body (**41**) which is of diffusion-open design,

characterized in

that the heat insulating element (**4**) further comprises a fabric (**42**), especially a fleece, which is of capillary-active design, and

that the fabric (**42**) is arranged and laminated on a surface of the insulating body (**41**).

2. The heat insulating element according to claim 1, characterized in that the fabric (**42**) comprises a capillarity for water with a capillary rise of more than 15 cm, preferably more than 20 cm.

3. The heat insulating element according to claim 1, characterized in that the fabric (**42**) is formed of glass fibers or plastic fibers.

4. (canceled)

5. The heat insulating element according to claim 1, characterized in that the insulating body (**41**) has a  $\mu$  value of  $\leq 3$ , preferably a  $\mu$  value of  $\leq 2$ .

6. The heat insulating element according to claim 1, characterized in that the insulating body (**41**) is formed of mineral wool or natural fibers, especially soft wood fibers.

7. A building construction with a separator between an inner side and an outer side of a building (**1**), wherein the inner side corresponds to a warm side of the building (**1**) and the outer side corresponds to a cold side of the building (**1**), and with a plurality of heat insulating elements (**4**) for an interior insulation, a facade insulation, or the like at said building (**1**) further comprising an insulating body (**41**) which is of diffusion-open design,

characterized in

that the heat insulating element (**4**) further comprises a fabric (**42**) which is of capillary-active design, and

that the fabric (**42**) is arranged and laminated on a surface of the insulating body (**41**).

8. The building construction according to claim 7, characterized in that the separator is a wall element (**3'**) and the heat insulating elements (**4**) form an interior insulation, wherein the fabric (**42**) is arranged to face the wall element (**3'**).

9. The building construction according to claim 7, characterized in that the separator is a wall element (**3**) and the heat insulating elements (**4**) form a facade insulation, wherein the fabric (**42**) is arranged to face away from the wall element (**3**) toward the outer side.

10. The building construction according to claim 7, characterized in that the separator is a roof structure (**2**) and the